

Electricity

1 (2019)

Q12	Marks
(a) Points plotted	9×1
Correct line drawn (for points plotted)	3
(b) Resistance increases with number of drops (or concentration)	3
(c) Ohmmeter	3

2 (2019)

Q13	Marks
(a) Dishwasher	3
(b) Useful form of energy (for appliance named) [See table below]	3
Unwanted form of energy (for appliance named) [See table below]	3
Calculation: 230	3
Unit: V	3
(c) Power is proportional to current	3

3 (2019)

4 (2019)

5 (2018)

(c) $V = I \times R$ / $I = \frac{V}{R}$ / $\frac{12}{6}$ (3)

2 A (3)

6 (2018)

(h)(i) X (3)

(ii) ammeter (3)

(iii)

Statement	Circuit X	Circuit Y	
Bulbs are brighter		✓	(2)
If one bulb is unscrewed no bulb will light	✓		(2)

7 (2017)

(a)(i) five points correctly plotted (5 × 1)

straight line through points (4)

(ii) proportional (3)

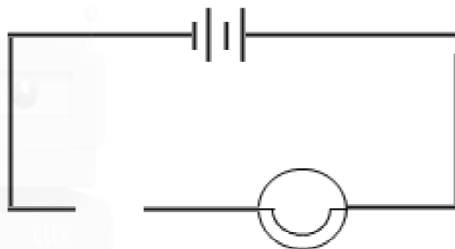
(iii) $V \div I$ / voltage from graph or table \div current from graph or table (3)

Range: 0.5 to 0.6 Ω / correct answer from student graph (3)

(iv) it gets hot / resistance rises / current decreases (3)

8 (2016)

(b) (i)



battery

bulb / LED / buzzer / ammeter } in a circuit

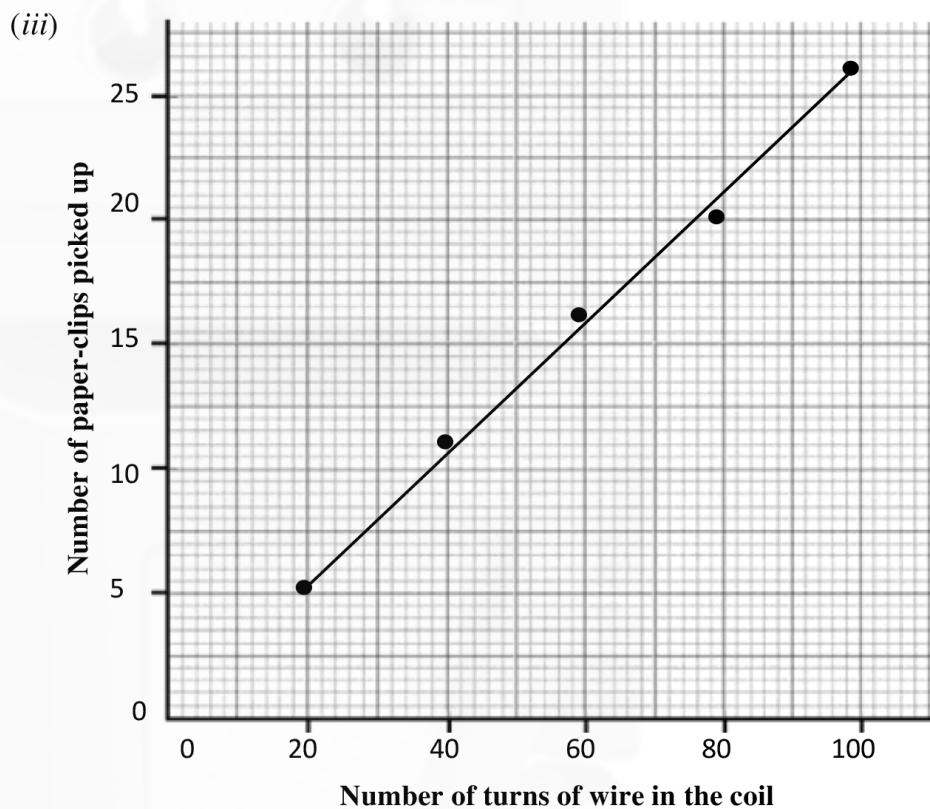
gap / sample

correct working circuit using correct symbols *or* a correct working drawing of the set up with at least one component labelled correctly (6)

[no partial marks available]

(ii) the bulb (LED / buzzer / ammeter) will light (sound / show a reading) when a conductor is placed in the gap in the circuit (3)

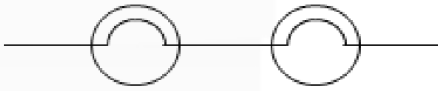
- (a)(i) iron // nickel // steel // cobalt (3)
- (ii) ammeter (3)
- (electric) current (3)



- five correctly plotted points (5 × 1)
- line of best fit (4)
- line from joining dots – Allow 2 marks
- (iv) 8 // answer consistent with graph (3)
- (v) same size/mass of paper clips // same magnet // same metal (bar) // same circuit // same type of wire // same laboratory conditions // same battery etc. (3)

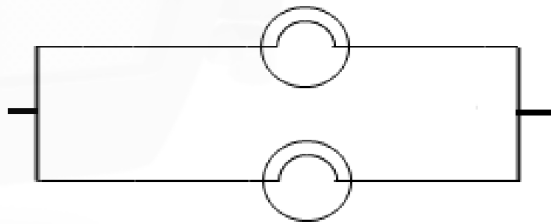
(c)(i) two bulbs in series

(3)



(ii) two bulbs in parallel

(3)



10 (2006)

- | | | | | |
|-----|------------------------|--|-----|-----|
| (b) | (i) <u>State</u> | parallel | (3) | |
| | <u>Give</u> | safety/ if one blows the other stays on/ both bulbs have full brightness (current) (brightness) (voltage)/ if they were in series both would go out/ two separate paths (circuits) | (3) | [6] |
| | (ii) <u>What?</u> | series | (3) | |
| | <u>Explain</u> | circuit is broken | (3) | [6] |
| | (iii) <u>Calculate</u> | 2.4 | (3) | |
| | <u>What?</u> | Ohm/ Ω | (3) | [6] |
- apply mathematical 'slip' and consequential marking here**

